

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A scroll compressor comprising:
 - a compression section provided in a closed container, said compression section including:
 - an orbiting scroll having a groove and volute teeth formed substantially symmetrically on both surfaces of an orbiting base plate, and a main shaft being penetrated through and fixed at a center portion of said orbiting scroll;
 - seal means provided at least partially inside the groove of the orbiting scroll; and
 - a pair of fixed scrolls opposed to said both surfaces of said orbiting scroll, each of said fixed scrolls having a volute tooth corresponding to each of said volute teeth of said orbiting scroll to respectively form compression chambers;
 - a motor provided in said closed container for driving said main shaft;
 - a suction pipe provided to said closed container for introducing a suction gas into said closed container and for causing said suction gas to be sucked into said compression section after cooling said motor; and
 - a discharge pipe provided to said closed container for discharging said suction gas compressed by said compression section,

wherein the seal means is provided for sealing the compression chambers formed between the orbiting scroll and the fixed scrolls from an orbiting bearing provided at a main shaft side of the orbiting scroll and from main shaft bearings provided between the fixed scrolls and the main shaft.

2. (Original) The scroll compressor according to claim 1, wherein
said closed container is vertically disposed,
said compression section is disposed at a lower portion in said closed container,
said motor is disposed at an upper portion in said closed container,
a lubricating oil storage chamber is formed in said closed container below said compression section, and
an oil feed pump for sucking up lubricating oil from said lubricating oil storage chamber is disposed at a lower end of said main shaft.

3. (Currently Amended) The scroll compressor according to claim 2,
wherein
said closed container is partitioned by said compression section into a motor housing part and the lubricating oil storage chamber,
said suction pipe is provided at said motor ~~hosing~~ housing part,
said discharge pipe is provided at said compression section, and
an oil feed path is formed, said oil feed path communicating from said oil feed pump, running through inside of said main shaft, opening at ~~a-an upper fixed scroll~~ main shaft bearing ~~of said upper fixed scroll~~, passing through ~~a-an orbiting~~

scroll main shaft bearing of said orbiting scroll, passing through a lower fixed scroll main shaft bearing of said lower fixed scroll and reaching said lubricating oil storage chamber.

4. (Original) The scroll compressor according to claim 3, wherein a passage is provided in said compression section for communicating between said motor housing part and said lubricating oil storage chamber, and a check valve, for preventing backflow of said lubricating oil, is provided at an opening of said passage at said lubricating oil storage chamber.

5. (Original) The scroll compressor according to claim 3, wherein a suction port, for communicating between said motor housing part and said compression chamber, is provided at an outer peripheral portion of said upper fixed scroll of said compression section.

6. (Currently Amended) The scroll compressor according to claim 1, wherein said suction pipe is provided to said closed container ~~in a vicinity of~~ at said compression section, and a glass terminal is provided at an upper end portion of said closed container.

7. (Canceled)

8. (Currently Amended) The scroll compressor according to claim 7,claim 1, wherein said seal means is provided at a core part of said orbiting scroll at surfaces thereof facing to said fixed scrolls.

9. (Currently Amended) A scroll compressor comprising:

a compression section provided in a closed container, said compression section including:

an orbiting scroll having a groove and volute teeth formed substantially symmetrically on both surfaces of an orbiting base plate, and a main shaft being penetrated through and fixed at a center portion of said orbiting scroll;

seal means provided at least partially inside the groove of the orbiting scroll; and

a pair of fixed scrolls opposed to said both surfaces of said orbiting scroll base plate, each of said fixed scroll having volute tooth teeth corresponding to each of said volute teeth of said orbiting scroll to respectively form compression chambers; and

a motor provided in said closed container for driving said main shaft,

wherein the seal means is provided for sealing the compression chambers formed between the orbiting scroll and the fixed scrolls from an orbiting bearing provided at a main shaft side of the orbiting scroll and from main shaft bearings provided between the fixed scrolls and the main shaft, and

wherein each of said orbiting scroll and fixed scrolls has more than two turns of volute tooth teeth formed toward the periphery of said main shaft.

10. (Previously Presented) The scroll compressor according to claim 9, wherein said orbiting scroll is composed of a core part and an volute part, wherein said core part has a orbiting bearing in a center portion thereof and is formed in a curved shape such as an arc, and said volute part is formed at periphery of said core part and has a continuous volute teeth formed in a volute curve in substantially the same height as said core part.

11. (Currently Amended) The scroll compressor according to claim 10, wherein said fixed scroll has a recess in a center portion and an volute tooth formed on the outer periphery of said recess, said recess accommodating said core part of said orbiting scroll, said volute tooth, being in the same in size as said a volute tooth of said orbiting scroll formed in an volute curve, being rotated 180 degrees in phase.

12. (Currently Amended) The scroll compressor according to claim 9, wherein said scroll compressor uses a suction gas for performing an operation with a low-compression ratio operation less than 3.

13. (Currently Amended) The scroll compressor according to claim 9, wherein said scroll compressor uses suction gas is a CO₂ gas as a suction gas for performing a compression operation.

14. (Currently Amended) The scroll compressor according to claim 10, wherein an innermost chamber of said core part of said orbiting scroll does not

contribute to compression~~is formed in a shape to make a top clearance volume at minimum.~~

15. (Currently Amended) The scroll compressor according to claim 10, wherein a pair of said compression chambers ~~are~~is formed by a combination of said orbiting scroll and said fixed scroll, and a relief portion, for causing said pair of compression chambers to communicate with each other ~~in a final compression step to be shifted to a discharge step~~during part of a compression operation, is provided in said core part of said orbiting scroll.

16. (Previously Presented) The scroll compressor according to claim 8, wherein a discharge port of a compressed gas is provided in a center portion of said fixed scroll at a spot which is not across said seal means.

17. (Currently Amended) The scroll compressor according to claim 16, wherein said discharge port is provided at only one of the fixed scrolls, and a communication port is provided penetrating through the orbiting base plate ~~in the vicinity of~~at said core part of said orbiting scroll and outside said seal means, and said communication port is not across said compression chamber and always communicates with said discharge port.

18. (Currently Amended) The scroll compressor according to claim 17, wherein said discharge port and said communication port are formed respectively as a long hole or by a plurality of holes adjacent to each other.

19. (Previously Presented) The scroll compressor according to claim 1, wherein said suction gas is a CO₂ gas.

20. (New) The scroll compressor according to claim 1, wherein the seal means is actuated by a pressure exerted on the seal means by a lubricating oil.

21. (New) The scroll compressor according to claim 20, wherein the pressure is exerted on two surfaces of the seal means.